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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

DAWSON, GLENN K

ART UNIT PAPER NUMBER

3731

DATE MAILED: 06/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/047,742

Applicant(s)

DENG, WENJIE

Examiner

Glenn K. Dawson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 16-24 is/are allowed.
- 6) ☒ Claim(s) 1, 5, 7, 9-12 and 25-28 is/are rejected.
- 7) ☒ Claim(s) 2-4, 6, 8 and 13-15 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 1-15-02 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>04-10-2002</u> . | 6) <input type="checkbox"/> Other: ____. |

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the valve barrel being seated in the stem bore; the retaining member being in the valve stem, valve arm or housing to engage the housing; and the 2nd valve bore must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "120" has been used to designate both a spring and a

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notch; and character 84 has been used to designate both a bore and a screw.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: set screw 112. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: the specification does not provide support for the retaining member being positioned in the valve arm to engage the housing or stem to hold the stem in the chamber; the valve lever or stem is provided with a bore in which the retaining member is seated, the valve lever or stem provided with a removable locking member to engage the retaining member; the lever having valve holes; a second pin seated in a second bore.

The applicant is required to update the status of serial no. 09/454113 cited in the specification pages 2-3.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 27 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 27, the suction fitting is mounted to the proximal end of the suction fitting. This is not possible.

Claim Objections

Claims 2-4, 6 and 10-15 are objected to because of the following informalities:

In claim 2, "a valve barrel formed flexible material" is missing terms. In claim 6 line 9, there are two recitations of valve stem. In claim 10 line 11, "said valve stem being formed from to define" is missing terms. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

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not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1 and 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sjostrom, et al.-5871493 in view of Cook-5241990.

Sjostrom discloses a handpiece attached to a cutter, the handpiece houses a motor and includes a rotatable valve 635 mounted in a chamber in the housing. The valve leads to a suction tube having a coupling 650 at an angle as shown in fig. 3A. However, the valve stem bores are not disclosed as being non-circular. Cook discloses that making valve bores teardrop shaped was known at the time of the invention. It would have been obvious to have used tear-drop shaped valve bores, as taught by Cook, as this allows for further regulation of the degree of suction flow (see Cook col. 5 lines 10-52).

Claims 5 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sjostrom, et al. 5871493 in view of Cook-5241990 as applied to the claims above, and further in view of Deng, et al.-6436067.

Sjostrom as modified by Cook makes obvious the invention as claimed with the exception of the indexing assembly. Deng discloses an indexing assembly on a valve. It would have been obvious to have provided Sjostrom with an indexing assembly, as it provided feedback to the user of the valve attaining a specific position.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sjostrom, et al.-5871493 in view of Cook-5241990 as applied to the claims above, and further in view of Schwarz, et al.-4927116.

Sjostrom as modified by Cook makes obvious the invention as claimed with the exception of the closed bore and the retaining member. Schwarz discloses a valve chamber with a closed bore and a retaining member 29. It would have been obvious to have provided a closed bore valve chamber with a retaining member as this has been shown to be an effective housing for a rotatable valve while providing a means by which the valve seat will not fall out of the bore.

Claims 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sjostrom, et al.-'493 in view of Wyzenbeek-2525329.

Sjostrom discloses the invention as claimed with the exception of the rotatable coupling on the suction fitting. Wyzenbeek discloses a rotatable coupling on a suction fitting for a suction tube. It would have been obvious to have provided a rotatable suction fitting coupling on Sjostrom's device, as this allows for the handpiece to rotate relative to the suction tube thus counteracting torsional forces applied while moving and operating the handpiece.

Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sjostrom, et al.-'493 in view of Wyzenbeek-'329 as applied to claim 25 above, and further in view of Cox-4113288.

Sjostrom as modified by Wyzenbeek makes obvious the invention as claimed with the exception of the removable locking member and groove on the suction fitting

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coupling. Cox discloses a rotatable coupling on a flow tube having a locking member 42 which has a flange which locks into a groove (between 48 and 44 in fig. 3) of element 44. It would have been obvious to have used the connection of Cox for the suction fitting of Sjostrom as it provides a conduit with a constant flow diameter while providing a rotatable coupling allowing rotation of one tube to not be translated to the other tube.

Claims 1,5 and 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deng, et al.-6436067 in view of Cook-'990.

Deng discloses a handpiece attached to a cutter. The handpiece houses a motor and has a rotatable valve in a valve chamber of the housing. The valve has a lever 60 attached to a stem having valve bores 58. The valve communicates with a suction tube and fitting 46. However, the bores being non-circular is not disclosed. Cook discloses that making valve bores teardrop shaped was known at the time of the invention. It would have been obvious to have used tear-drop shaped valve bores, as taught by Cook, as this allows for further regulation of the degree of suction flow (see Cook col. 5 lines 10-52.

Claims 25 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deng, et al.-067 in view of Wyzenbeek-2525329.

Deng discloses the invention as claimed with the exception of the rotatable coupling on the suction fitting. Wyzenbeek discloses a rotatable coupling on a suction fitting for a suction tube. It would have been obvious to have provided a rotatable suction fitting coupling on Deng's device, as this allows for the handpiece to rotate relative to

the suction tube thus counteracting torsional forces applied while moving an operating the handpiece.

Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Deng-'067 in view of Wyzenbeek-'329 as applied to claim 25 above, and further in view of Sjostrom-'493.

Deng as modified by Wyzenbeek makes obvious the invention as claimed with the exception of the angled fitting. Sjostrom teaches of angling the suction fitting. It would have been obvious to have angled the suction fitting, as taught by Sjostrom, as this would allow the suction conduit better clearance during connection to the suction fitting.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1,7,10,11 and 12 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 7 and 10 of U.S. Patent No. 6312441 in view of Cook-'990.

Claim 7 of the patent claims the invention as claimed with the exception that the application claims are broader in some respects but narrower in others. The claims of the patent fail to disclose the non-circular valve bore openings. Cook discloses such openings. It would have been obvious to have proved the device of claim 7 with the non-round valve bore openings of Cook, as this allows for more suction control as noted above.

Claims 5 and 6 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 7 and 10 of U.S. Patent No. 6312441 in view of Cook-'990 and Deng, et al.-'067.

The difference between claims 5 and 6 of the application are that they include an indexing assembly. Deng discloses an indexing assembly. It would have been obvious to have used an indexing assembly on the device of claims 7 or 10 in order to provide the user with a tactile indication of the valves position.

Claims 25-28 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 7 and 10 of U.S. Patent No. 6312441 in view of Wyzenbeek, Sjostrom and Cox.

The difference between the claims of the patent and those of the application are that the application claims include a rotatable suction coupling on the fitting and angle the fitting. Wyzenbeek discloses a rotatable coupling on a suction conduit. Sjostrom discloses the angling of a suction conduit. Cox discloses a locking member on a rotatable coupling. It would have been obvious to have placed a rotatable coupling with a locking member at an angle to the handle housing, because such a configuration

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allows for easier connection of the suction tube to the fitting and provides a coupling whereby torsional forces are not transmitted from the handle to the suction conduit.

Allowable Subject Matter

Claim 8 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 16-24 are allowed.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Glenn K. Dawson whose telephone number is 703-308-4304. The examiner can normally be reached on M-Th 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anhtuan T. Nguyen can be reached on 703-308-2154. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Glenn K Dawson
Primary Examiner
Art Unit 3731

Gkd
23 June 2005